UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/529,413 | 06/23/2005 | Daniel Christopher Brookings | Cell-0293 | 6765 |

23377 7590 11/15/2007

WOODCOCK WASHBURN LLP
CIRA CENTRE, 12TH FLOOR
2929 ARCH STREET
PHILADELPHIA, PA 19104-2891

| EXAMINER | |
|---|---|
| MABRY, JOHN | |
| **ART UNIT** | **PAPER NUMBER** |
| 1625 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 11/15/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/529,413 | BROOKINGS ET AL. | |
| | Examiner | Art Unit | |
| | John Mabry | 4133 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *23 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-9 and 12-21* is/are pending in the application.

4a) Of the above claim(s) *12-21* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *none*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

The Examiner notes that there was no information disclosure statement filed with this application.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "a linker atom or group" in all occurrences in the claims is interpreted to be a relative term which renders the claim indefinite. The term "a linker atom or group" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. What does Applicant intend by this term? Any atom or group has no limitations and is deemed vague and indefinite.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for salts, does not reasonably provide enablement for hydrates and solvates. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

The claims are drawn to hydrates and solvates. But the numerous examples presented all failed to produce a hydrate or solvate. These cannot be simply willed into existence. As was stated in *Morton International Inc. v. Cardinal Chemical Co.*, 28 USPQ2d 1190 "The specification purports to teach, with over fifty examples, the preparation of the claimed compounds with the required connectivity. However ... there is no evidence that such compounds exist... the examples of the '881 patent do not produce the postulated compounds... there is ... no evidence that such compounds even exist." The same circumstance appears to be true here: there is no evidence that solvates of these compounds actually exist; if they did, they would have formed. Hence, applicants must show that solvates can be made, or limit the claims accordingly.

Claims 1-9 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for $(Alk^1)_nL^1Cy^1$ wherein n=0, $L^1$=covalent bond and $Cy^1$=phenyl, thiophenyl, H and 6-indolyl, does not reasonably provide enablement for $(Alk^1)_nL^1Cy^1$ wherein n=1, $L^1$=a linker atom atom or group and for all variations and substituent patterns for $Cy^1$ that is represented by the following:

$Cy^1$ is an optionally substituted cycloaliphatic, polycycloaliphatic, heterocycloaliphatic, polyheterocycloaliphatic, aromatic or heteroaromatic group, or is additionally a hydrogen atom when n is the integer 1 and/or $L^1$ is a linker atom or group

Additionally, the specification while being enabling for $R^a$, $R^b$ and $R^c$ being H, does not reasonably provide enablement for $R^a$, $R^b$ and $R^c$ being the following:

$R^a$, $R^b$ and $R^c$ are each independently a halogen atom or an optionally substituted alkyl, -CN, $-CO_2R^1$ or $-CONR^1R^2$ group

Furthermore, the specification while being enabling for L being $-CH_2-$, $-CH_2CH_2-$, and $-S(O)_2-$ does not reasonably provide enablement for L being –C(O)-, -C(O)- and $C(R^{1f})(R^{1g})$ wherein $R^{1f}$ and $R^{1g}$ being the following:

$R^{1f}$ and $R^{1g}$, are, independently, a straight or branched $C_{1-3}$alkyl group optionally substituted by one, two or three fluorine atoms, or $R^{1f}$ and $R^{1g}$, together with the carbon atom to which they are attached, form a cyclopropyl group;

Moreover, the specification while being enabling for Ar being phenyl, thiophenyl, 2-benzothiazoyl, pyridinyl, does not reasonably provide enablement for Ar being all variations and having all substituent patterns of all substituted aromatic and heteroaromatic groups.

The specification while being enabling for X where $R^e$ being H, CO(pyrolidinyl), $CO(NHNH_2)$, $CO(NH_2)$, CO(OEt), CN, $CO(N)OCH_3CH_3$, $S(O)_2$pyrolidinyl, $CO_2H$, does

not reasonably provide enablement for $R^e$ being all variations and having all substituent patterns as follows:

$R^e$ is a halogen atom or a $-CO_2R^1$, $-C(X^a)R^1$, $-Cy^2$, $-NR^{1a}R^{2a}$, $-C(X^a)NR^{1a}R^{2a}$, $-S(O)_2NR^{1a}R^{2a}$, $-N(R^{3a})C(X^a)R^1$, $-N(R^{3a})C(X^a)NR^{1a}R^{2a}$, $-N(R^{3a})S(O)_2R^1$, $-N(S(O)_2R^1)_2$, $-N(R^{3a})S(O)_2NR^{1a}R^{2a}$, $-N(R^{3a})C(O)OR^1$, $-N(R^{3a})C(NR^1)NR^{1a}R^{2a}$, $-C(R^1)NOR^2$, $-C(NR^1)NR^{1a}R^{2a}$, $-C(X^a)NR^{1a}OR^{2a}$ or $-C(O)N(R^{3a})NR^{1a}R^{2a}$ group;

Lastly, the specification while being enabling for Y where $R^e$ being H and $CO(CF_3)$, does not reasonably provide enablement for $R^e$ being all variations and having all substituent patterns as follows:

$R^e$ is a hydrogen or halogen atom or a -CN, $-OR^1$, $-CO_2R^1$, $-C(X^a)R^1$, $-Cy^2$, $-NR^{1a}R^{2a}$, $-C(X^a)NR^{1a}R^{2a}$, $-S(O)_2NR^{1a}R^{2a}$, $-N(R^{3a})C(X^a)R^1$, $-N(R^{3a})C(X^a)NR^{1a}R^{2a}$, $-N(R^{3a})S(O)_2R^1$, $-N(S(O)_2R^1)_2$, $-N(R^{3a})S(O)_2NR^{1a}R^{2a}$, $-N(R^{3a})C(O)OR^1$, $-N(R^{3a})C(NR^1)NR^{1a}R^{2a}$, $-C(R^1)NOR^2$, $-C(NR^1)NR^{1a}R^{2a}$, $-C(X^a)NR^{1a}OR^{2a}$ or $-C(O)N(R^{3a})NR^{1a}R^{2a}$ group;

The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The Specification does not provide any support for said variables at $(Alk^1)_nL^1Cy^1$, $R^a$, $R^b$ and $R^c$ , L, Ar , X and Y positions. Pages 38-72 of the Specification describe starting materials and methods for synthesis of compounds wherein $(Alk^1)_nL^1Cy^1$, $R^a$, $R^b$ and $R^c$ , L, Ar , X and Y are enabled, but does not describe or list any reagents wherein compounds can be used to synthesis compounds where $(Alk^1)_nL^1Cy^1$, $R^a$, $R^b$ and $R^c$ , L, Ar , X and Y as listed above.

Pursuant to *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988), one considers the following factors to determine whether undue experimentation is required: (A) The breadth of the claims; (B) The nature of the invention; (C) The state of the prior art; (D) The level of one of ordinary skill; (E) The level of predictability in the art; (F) The amount of direction provided by the inventor; (G) The existence of working examples; and (H) The quantity of experimentation needed to make or use the invention based on the content of the disclosure. Some experimentation is not fatal; the issue is whether the amount of experimentation is "undue"; see *In re Vaeck*, 20 USPQ2d 1438, 1444.

The analysis is as follows:

(1) Breadth of claims: Scope of the compounds. Owing to the range of many variables, millions of highly substituted 1H-pyrrol[3,2-b]pyridine compounds are embraced.

(2) The nature of the invention: The invention is a highly substituted 1H-pyrrol[3,2-b]pyridine compounds.

(3) Level of predictability in the art: It is well established that "the scope of enablement varies inversely with the degree of unpredictability of the factors involved," and chemical reactivity (which is affected by determinants such as substituent effects, bonding, molecular geometry, etc) is generally considered to be an unpredictable factor. See *In re Fisher*, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970).

(4) Direction or Guidance: That provided is very limited. Applicant shows a general synthese of compounds of application's general formula 1. Pages 38-72 of the Specification describe starting materials and methods for synthesis of compounds wherein $(Alk^1)_nL^1Cy^1$, $R^a$, $R^b$ and $R^c$, L, Ar, X and Y are enabled as described above, but does not describe or list any reagents wherein compounds can be used to synthesis compounds where $(Alk^1)_nL^1Cy^1$, $R^a$, $R^b$ and $R^c$, L, Ar, X and Y as previously mentioned. There is limited evidence in the Specification of the example compounds that only covers no or a small portion of the substituents claimed of formula 1. Thus, there is no specific direction or guidance regarding said compounds specifically mentioned in Scope.

The availability of the starting material that is needed to prepare the invention as claimed is at issue here...As per MPEP 2164.01 (b). A key issue that can arise when determining whether the specification is enabling is whether the starting materials or apparatus necessary to a make the invention are available. In the biotechnical area, this is often true when the product or process requires a particular strain of microorganism and when the microorganism is available only after extensive screening. The Court *in re Ghiron*, 442 F.2d 985, 991, 169 USPQ 723, 727 (CCPA 1971), made it clear that if the practice of a method requires a particular apparatus, the application must provide a sufficient disclosure of the apparatus if the apparatus is not readily available. The same can be said if certain chemicals are required to make a compound

or practice a chemical process. *In re Howarth*, 654 F.2d 103, 105, 210 USPQ 689, 691 (CCPA 1981).

(5) State of the Prior Art: These compounds are substituted 1H-pyrrol[3,2-b]pyridine compounds wherein L=alkyl, Ar=phenyl, heterocyclyl, and $R^e$=CO(aromatic), phenyl, H, which are well documented in the art. So far as the examiner is aware, no substituted 1H-pyrrol[3,2-b]pyridine compounds of general formula 1, wherein $(Alk^1)_nL^1Cy^1$, $R^a$, $R^b$ and $R^c$ , L, Ar , X and Y equals as mentioned above.

(6) Working Examples: Applicant shows examples 1-53 (chart on pages 54-72) but no working examples were shown wherein $(Alk^1)_nL^1Cy^1$, $R^a$, $R^b$ and $R^c$, L, Ar, X and Y equals, as mentioned above, have been made or used of any kind.

(7) Skill of those in the art: The ordinary artisan is highly skilled, e.g. a masters or PhD level chemist.

(8) The quantity of experimentation needed: Since there are very limited working examples as described above, the amount of experimentation is expected to be high and burdensome.

Due to the level of unpredictability in the art, the very limited guidance provide, and the lack of working examples, the Applicant has shown lack of enablement for the groups noted.

MPEP 2164.01(a) states, "A conclusion of lack of enablement means that, based on the evidence regarding each of the above factors, the specification, at the time the application was filed, would not have taught one skilled in the art how to make and/or use the full scope of the claimed invention without undue experimentation. *In re Wright*, 999 F.2d 1557,1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993)." That conclusion is clearly justified here.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

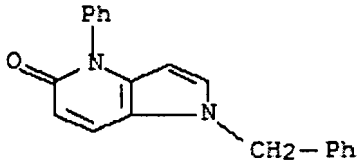
> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

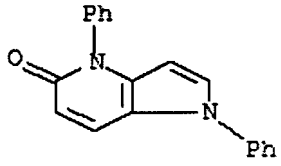
Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 7,176,215 B2.

The instant invention claims compounds of Formula 1 and pharmaceutical compositions thereof wherein X,Y,A=C; $(Alk^1)_nL^1Cy^1$ = phenyl whereas n=0, $L^1$=a covalent bond; Ra=H; L= $-CH_2-$; and Ar=phenyl.




***Scope & Content of Prior Art MPEP 2141.01***

US 7,176,215 B2 discloses compounds of Formula 1 and pharmaceutical compositions thereof wherein X,Y,A=C; (Alk1)nL1Cy1 = phenyl whereas n=0, $L^1$=a covalent bond; Ra=H; L=a covalent bond; and Ar=phenyl (see page .



***Differences between Prior Art & the Claims MPEP 2141.02***

US 7,176,215 B2 differs from instant invention at the L position: 7,176,215 B2's covalent bond versus Applicant's $-CH_2-$ group, which are considered homologs.

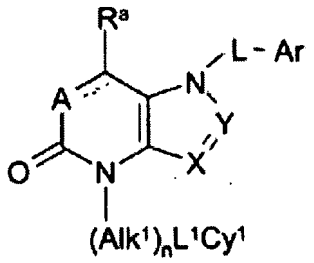
***Prima Facie Obviousness, Rational & Motivation MPEP 2142-2413***

It would be obvious to one of ordinary skill of the art at the time the invention was made to modify the compounds of Formula 1 at the L position by one carbon unit in order to treat diseases and disorders that are of similar nature.

Additionally, the MPEP 2144.09 which states: Compounds which are homologs (compounds differing regularly by the successive addition of the same chemical group, e.g., by $-CH_2-$ groups) are generally of sufficiently close structural similarity that there is a presumed expectation that such compounds possess similar properties. *In re Wilder*, 563 F.2d 457, 195 USPQ 426 (CCPA 1977). Thus, said claims are rendered obvious by US 7,176,215 B2.

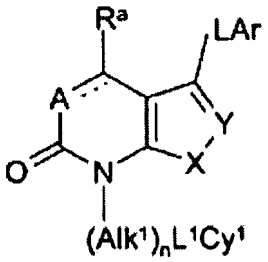
Claims 1-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2006/0025428 A1.

The instant invention claims compounds of Formula 1 and pharmaceutical compositions thereof wherein X and Y=C and N is bonded to –L-Ar.




***Scope & Content of Prior Art MPEP 2141.01***

US 2006/0025428 A1 discloses compounds and pharmaceutical compositions thereof wherein Y=C, X=N and C is bonded to –L-Ar (see Specification page 2, paragraph 16 – page 3, paragraph 28 and claim 1, page 25).




***Differences between Prior Art & the Claims MPEP 2141.02***

US 2006/0025428 A1 differs from instant invention at the atom at the L-Ar point of attachment and the X position: US 2006/0025428 A1's C and N at respective

positions versus Applicant's N and C at respective positions, which are considered positional isomers.

***Prima Facie Obviousness, Rational & Motivation MPEP 2142-2413***

It would be obvious to one of ordinary skill of the art at the time the invention was made to modify the N and C atoms of the compounds of Formula 1 at the L-Ar and X positions.

There is little difference between the N atom being at the –L-Ar point of attachment as compared to the C atoms at the –L-Ar point of attachment on the claimed structure of formula 1. It is well established that position isomers are prima facie structurally obvious even in the absence of a teaching to modify. The isomer is expected to be prepared by the same method and to have generally the same properties. This expectation is then deemed the motivation for preparing the position isomers. This circumstance has arisen many times. See: *Ex parte Englehardt,* 208 USPQ 343, 349; *In re Mehta,* 146 USPQ 284, 287; *In re Surrey*, 138 USPQ 67; *Ex Parte Ullyot,* 103 USPQ 185; *In re Norris,* 84 USPQ 459; *Ex. Parte Naito,* 168 USPQ 437, 439; *Ex parte Allais,* 152 USPQ 66; *In re Wilder,* 166 USPQ 545, 548; *Ex parte Henkel,* 130 USPQ 474; *Ex parte Biel,* 124 USPQ 109; *In re Petrzilka,* 165 USPQ 327; *In re Crownse,* 150 USPQ 554; *In re Fouche,* 169 USPQ 431; *Ex parte Ruddy,* 121 USPQ 427; *In re Wiechert,* 152 USPQ 249, *In re Shetty,* 195 USPQ 753; *In re Jones,* 74 USPQ 152, 154. There may be others as well. Thus, said claims are rendered obvious by US 2006/0025428 A1.

For example, "Position isomerism has been used as a tool to obtain new and useful drugs" (*Englehardt*) and "Position isomerism is fact of close structural similarity" (*Mehta*, emphasis in the original). Note also *In re Jones,* 21 USPQ2d 1942, which states at 1943 "Particular types or categories of structural similarity without more, have, in past cases, given rise to prima facie obviousness"; one of those listed is "adjacent homologues and structural isomers". Position isomers are the basic form of close "structural isomers." Similar is *In re Schechter and LaForge,* 98 USPQ 144, 150, which states "a novel useful chemical compound which is homologous or isomeric with compounds of the prior art is unpatentable unless it possesses some unobvious or unexpected beneficial property not possessed by the prior art compounds." Note also *In re Deuel* 34 USPQ2d 1210, 1214 which states, "Structural relationships may provide the requisite motivation or suggestion to modify known compounds to obtain new compounds...a known compound may suggest it analog or isomers, either geometric (cis v. trans) or position isomers (e.g. *ortho* v. *para*)." See also MPEP 2144.09, second paragraph. Further, the reference provides for the ring being substituted in any position.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

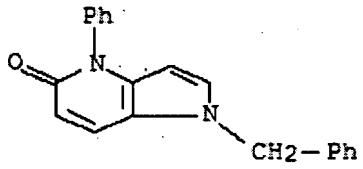
A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

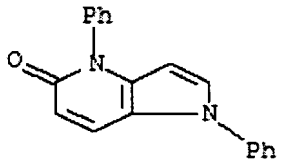
Claims 1-7 and 9 are rejected on the ground of nonstatutory double patenting over claims 1-12 and 14 of U. S. Patent No. 7,176,215 B2 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows.

The instant invention claims compounds of Formula 1 and pharmaceutical compositions thereof wherein X,Y,A=C; $(Alk^1)nL^1Cy^1$ = phenyl whereas n=0, L1=a covalent bond; Ra=H; L= $-CH_2-$; and Ar=phenyl.




US 7,176,215 B2 discloses compounds of Formula 1 and pharmaceutical compositions thereof wherein X,Y,A=C; $(Alk^1)nL^1Cy^1$ = phenyl whereas n=0, $L^1$=a covalent bond; Ra=H; L=a covalent bond; and Ar=phenyl (see page .




US 7,176,215 B2 differs from instant invention at the L position, 7,176,215 B2's covalent bond versus Applicant's $-CH_2-$ group, which are considered homologs.

The MPEP 2144.09 which states: Compounds which are homologs (compounds differing regularly by the successive addition of the same chemical group, e.g., by $-CH_2-$ groups) are generally of sufficiently close structural similarity that there is a presumed expectation that such compounds possess similar properties. *In re Wilder*, 563 F.2d 457, 195 USPQ 426 (CCPA 1977). Thus, obvious double patenting is rendered by US 7,176,215 B2.

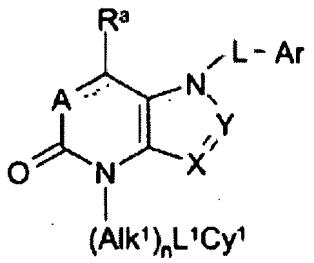
Additionally, the compounds of Formula 1 of US 7,176,215 B2 and instant application overlaps in scope pertaining to the structural similarities and there method of inhibition and treatment claimed.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

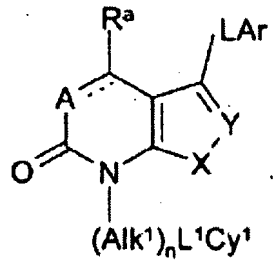
Claims 1-7 and 9 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 and 9 of copending Application No. 2006/0025428 A1. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following.

Claims 1-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2006/0025428 A1.

The instant invention claims compounds of Formula 1 and pharmaceutical compositions thereof wherein X and Y=C and N is bonded to –L-Ar.




US 2006/0025428 A1 discloses compounds and pharmaceutical compositions thereof wherein Y=C, X=N and C is bonded to –L-Ar (see Specification page 2, paragraph 16 – page 3, paragraph 28 and claim 1, page 25).




US 2006/0025428 A1 differs from instant invention at the atom at the L-Ar attachment and the X position: US 2006/0025428 A1's C and N at respective positions versus Applicant's N and C at respective positions, which are considered positional isomers.

It would be obvious to one of ordinary skill of the art at the time the invention was made to modify the N and C atoms of the compounds of Formula 1 at the L-Ar point of attachment and X position.

There is little difference between the N atom being at the –L-Ar point of attachment as compared to the C atoms at the –L-Ar point of attachment on the claimed structure of formula 1. It is well established that position isomers are prima facie structurally obvious even in the absence of a teaching to modify. The isomer is expected to be prepared by the same method and to have generally the same properties. This expectation is then deemed the motivation for preparing the position isomers. This circumstance has arisen many times. See: *Ex parte Englehardt,* 208 USPQ 343, 349; *In re Mehta,* 146 USPQ 284, 287; *In re Surrey*, 138 USPQ 67; *Ex Parte Ullyot,* 103 USPQ 185; *In re Norris,* 84 USPQ 459; *Ex. Parte Naito,* 168 USPQ 437, 439; *Ex parte Allais,* 152 USPQ 66; *In re Wilder,* 166 USPQ 545, 548; *Ex parte Henkel,* 130 USPQ 474; *Ex parte Biel,* 124 USPQ 109; *In re Petrzilka,* 165 USPQ 327; *In re Crownse,* 150 USPQ 554; *In re Fouche,* 169 USPQ 431; *Ex parte Ruddy,* 121 USPQ 427; *In re Wiechert,* 152 USPQ 249, *In re Shetty,* 195 USPQ 753; *In re Jones,* 74 USPQ 152, 154. There may be others as well. Thus, obvious double patenting is rendered by US 2006/0025428 A1.

For example, "Position isomerism has been used as a tool to obtain new and useful drugs" (*Englehardt*) and "Position isomerism is fact of close structural similarity" (*Mehta*, emphasis in the original). Note also *In re Jones,* 21 USPQ2d 1942, which states at 1943 "Particular types or categories of structural similarity without more, have, in past cases, given rise to prima facie obviousness"; one of those listed is "adjacent homologues and structural isomers". Position isomers are the basic form of close "structural isomers." Similar is *In re Schechter and LaForge,* 98 USPQ 144, 150, which

states "a novel useful chemical compound which is homologous or isomeric with compounds of the prior art is unpatentable unless it possesses some unobvious or unexpected beneficial property not possessed by the prior art compounds.". Note also *In re Deuel* 34 USPQ2d 1210, 1214 which states, "Structural relationships may provide the requisite motivation or suggestion to modify known compounds to obtain new compounds...a known compound may suggest it analog or isomers, either geometric (cis v. trans) or position isomers (e.g. ortho v. para)." See also MPEP 2144.09, second paragraph. Further, the reference provides for the ring being substituted in any position.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Conclusion***

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Mabry, PhD whose telephone number is (571) 270-1967. The examiner can normally be reached on M-F from 9am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres, can be reached on (571) 272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

jm

JM

RITA DESAI
PRIMARY E[illegible]NER

RDesai
11/8/07